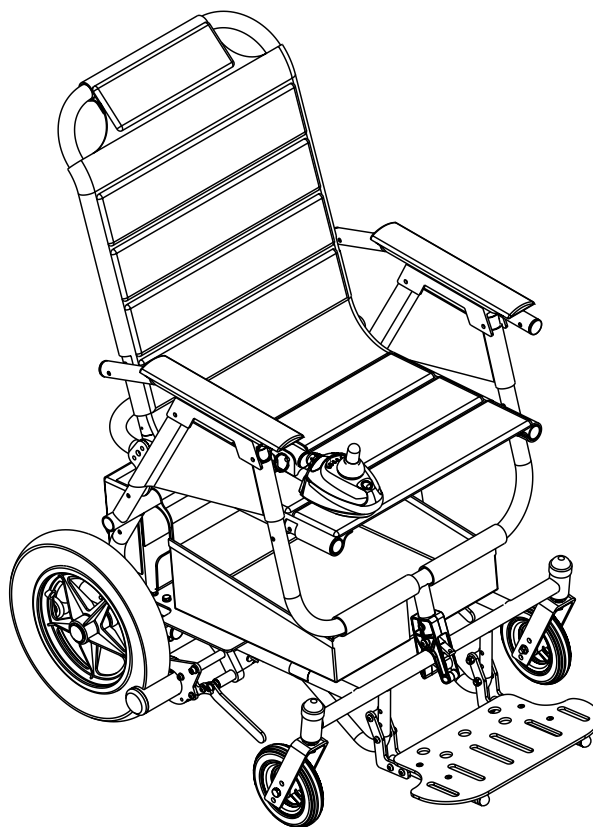


Owner's Operator and Maintenance Manual

At'm



DEALER: This manual **MUST** be given to the user of the wheelchair.

USER: **BEFORE** using this wheelchair, read this manual and save for future reference.

For more information regarding
Invacare products, parts, and services,
please visit www.invacare.com



Yes, you can:

⚠ WARNING

A QUALIFIED TECHNICIAN MUST PERFORM THE INITIAL SET UP OF THIS WHEELCHAIR. ALSO, A QUALIFIED TECHNICIAN MUST PERFORM ALL PROCEDURES IN THE SERVICE MANUAL.

WHEELCHAIR USERS: DO NOT SERVICE OR OPERATE THIS EQUIPMENT WITHOUT FIRST READING AND UNDERSTANDING (1) THE OWNER'S OPERATOR AND MAINTENANCE MANUAL AND (2) THE SEATING SYSTEM'S MANUAL (IF APPLICABLE). IF YOU ARE UNABLE TO UNDERSTAND THE WARNINGS, CAUTIONS, AND INSTRUCTIONS, CONTACT INVACARE TECHNICAL SUPPORT BEFORE ATTEMPTING TO SERVICE OR OPERATE THIS EQUIPMENT - OTHERWISE INJURY OR DAMAGE MAY RESULT.

DEALERS AND QUALIFIED TECHNICIANS: DO NOT SERVICE OR OPERATE THIS EQUIPMENT WITHOUT FIRST READING AND UNDERSTANDING (1) THE OWNER'S OPERATOR AND MAINTENANCE MANUAL, (2) THE SERVICE MANUAL (IF APPLICABLE) AND (3) THE SEATING SYSTEM'S MANUAL (IF APPLICABLE). IF YOU ARE UNABLE TO UNDERSTAND THE WARNINGS, CAUTIONS AND INSTRUCTIONS, CONTACT INVACARE TECHNICAL SUPPORT BEFORE ATTEMPTING TO SERVICE OR OPERATE THIS EQUIPMENT - OTHERWISE, INJURY OR DAMAGE MAY RESULT.

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REGISTER YOUR PRODUCT

The benefits of registering:

1. Safeguard your investment.
2. Ensure long term maintenance and servicing of your purchase.
3. Receive updates with product information, maintenance tips, and industry news.
4. Invacare can contact you or your provider, if servicing is needed on your product.
5. It will enable Invacare to improve product designs based on your input and needs.

Register ONLINE at www.invacare.com

- or -

Complete and mail the form on the next page

Any registration information you submit will be used by Invacare Corporation only, and protected as required by applicable laws and regulations.



PRODUCT REGISTRATION FORM

Register **ONLINE** at www.invacare.com - or -
Complete and mail this form

Name _____

Address _____

City _____ State/Province _____

Zip/Postal Code _____

Email _____ Phone No. _____

Fold
here

Invacare Model No. _____ Serial No. _____

Purchased From _____ Date of Purchase: _____

1. Method of purchase: (check all that apply)

Medicare Insurance Medicaid Other _____

2. This product was purchased for use by: (check one)

Self Parent Spouse Other

3. Product was purchased for use at:

Home Facility Other

4. I purchased an Invacare product because:

Price Features (list features) _____

5. Who referred you to Invacare products? (check all that apply)

Doctor Therapist Friend Relative Dealer/Provider Other _____

Advertisement (circle one): TV, Radio, Magazine, Newspaper No Referral _____

6. What additional features, if any, would you like to see on this product?

_____ Fold
here

7. Would you like information sent to you about Invacare products that may be available for a particular medical condition? Yes No

If yes, please list any condition(s) here and we will send you information by email and/or mail about any available Invacare products that may help treat, care for or manage such condition(s):

8. Would you like to receive updated information via email or regular mail about the Invacare home medical products sold by Invacare's dealers? Yes No

9. What would you like to see on the Invacare website?

10. Would you like to be part of future online surveys for Invacare products? Yes No

11. User's Year of birth: _____

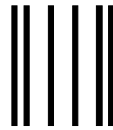
If at any time you wish not to receive future mailings from us, please contact us at Invacare Corporation, CRM Department, 39400 Taylor Parkway, Elyria, OH 44035, or fax to 877-619-7996 and we will remove you from our mailing list.

To find more information about our products, visit www.invacare.com.

Cut Along Line



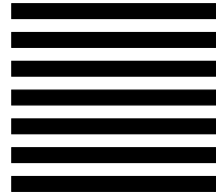
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CRM DEPARTMENT
39400 TAYLOR PARKWAY
ELYRIA OH 44035-9836



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Invacare Product Registration Form

Please Seal with
Tape Before Mailing

Cut Along Line



SPECIAL NOTES

WARNING/CAUTION notices as used in this manual apply to hazards or unsafe practices which could result in personal injury or property damage.

NOTICE

THE INFORMATION CONTAINED IN THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE.

WHEELCHAIR USER

As a manufacturer of wheelchairs, Invacare endeavors to supply a wide variety of wheelchairs to meet many needs of the end user. However, final selection of the type of wheelchair to be used by an individual rests solely with the user and his/her healthcare professional capable of making such a selection.

WHEELCHAIR TIE-DOWN RESTRAINTS AND SEAT RESTRAINTS

Wheelchair users should **NOT** be transported in vehicles of any kind while in wheelchairs. As of this date, the Department of Transportation has not approved any tie-down systems for transportation of a user while in a wheelchair, in a moving vehicle of any type.

It is Invacare's position that users of wheelchairs should be transferred into appropriate seating in vehicles for transportation and use be made of the restraints made available by the auto industry. Invacare cannot and does not recommend any wheelchair transportation systems.

WARNINGS

Invacare products are specifically designed and manufactured for use in conjunction with Invacare accessories. Accessories designed by other manufacturers have not been tested by Invacare and are not recommended for use with Invacare products.

The seat positioning strap is a positioning belt **ONLY**. It is not designed for use as a safety device withstanding high stress loads such as auto or aircraft safety belts. If signs of wear appear, belt **MUST** be replaced immediately.

LABEL LOCATION

WEIGHT CAPACITY
LIMITE DE POIDS
250 LBS. (114 kgs.)
 REFER TO OWNER'S MANUAL
 SE RÉFÉRER AU MANUEL DE L'UTILISATEUR

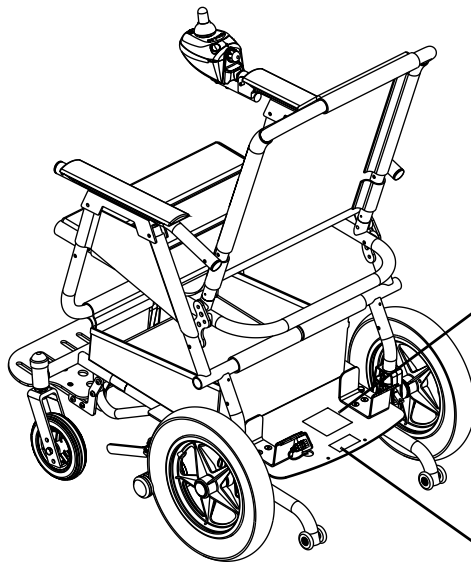
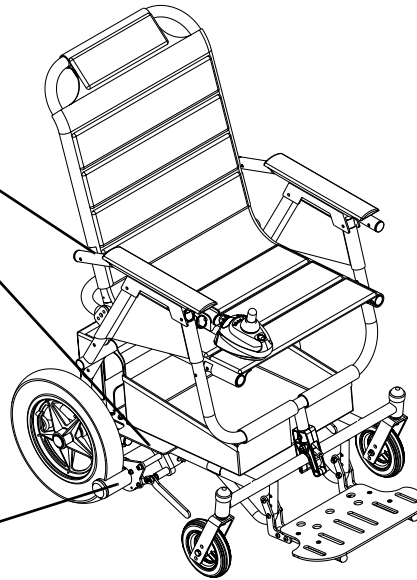
P/N 1111026

⚠ WARNING
 Push handle all the way down to engage motors.
 P/N 1125068 Rev A - 8/04

NOTE: Warning label 1125068 is also located on the opposite side

⚠ WARNING
 Keep fingers and clothing clear of drive wheel.
 P/N 1125069 Rev A - 8/04

NOTE: Warning label 1125069 is also located on the opposite side



⚠ WARNING
DO NOT REMOVE THIS LABEL

The POSITIVE (+) RED Battery Cable MUST connect to the POSITIVE (+) Battery Terminal(s)/ Post(s). The NEGATIVE (-) BLACK Battery Cable MUST connect to the NEGATIVE (-) Battery Terminal(s)/Post(s). DO NOT allow Battery Cable(s) to contact the opposite Battery Terminal(s)/Post(s). Replace cable(s) immediately if cable(s) insulation becomes damaged. Failure to observe these warnings may result in an electrical short with serious personal injury and/or damage to the electrical system. See Owner's Manual.

P/N 1125064

Labels in diagram: BLACK Battery Cable, 2-Slot Connector, RED Battery Cable, 20 AMP Circuit Breaker, White Battery Cable (Jumper)

⚠ WARNING
Maintain tire pressure at 30 p.s.i.
 P/N 1125070 Rev A - 8/04

TYPICAL PRODUCT PARAMETERS

PARAMETERS	At'm
SEAT WIDTH:	16, 18 inches
SEAT DEPTH:	14, 16 inches
BACK HEIGHT:	18, 21 inches
SEAT-TO-FLOOR:	20 inches
OVERALL WIDTH (EXCLUDING JOYSTICK):	25.5 inches
OVERALL HEIGHT FOR 16 INCHES WIDE: FOR 18 INCHES WIDE:	38 inches 41 inches
OVERALL LENGTH (INCLUDING ANTI-TIPPERS):	35.5 inches
WEIGHT BASE W/O BATTERY PACK: SEAT: BATTERY PACK:	34 lbs 14 lbs 26 lbs
SHIPPING:	85 lbs
DRIVE WHEELS/TIRES:	12½ x 2¼ inches
CASTER W/PRECISION SEALED BEARINGS:	6-inch solid
UPHOLSTERY:	Black Nylon
BATTERY SIZE (TWO [2] REQUIRED):	M17 - 12 SLSM gel cell
PERFORMANCE SPEED (M.P.H.): MAXIMUM RAMP/SLOPE CAPABILITY: *RANGE (VARIABLE): WEIGHT LIMITATION:	3¾ 6° Up to 12 miles 250 lbs

**NOTE: Range will vary with battery conditions, surface, terrain, and operating weight.*

SECTION I—GENERAL GUIDELINES

⚠ WARNING

SECTION I - GENERAL GUIDELINES contains important information for the safe operation and use of this product. **DO NOT** use this product or any available optional equipment without first completely reading and understanding these instructions and any additional instructional material such as **Owner's Manuals, Service Manuals or Instruction Sheets** supplied with this product or optional equipment. If you are unable to understand the **Warnings, Cautions or Instructions**, contact a healthcare professional, dealer or technical personnel before attempting to use this equipment - otherwise, injury or damage may occur.

CONTROLLER SETTINGS/REPAIR OR SERVICE

Set-up of the Electronic Control Unit is to be performed **ONLY** by a qualified technician. The final adjustments of the controller may affect other activities of the wheelchair. Reprogramming the controller reduces the stability/control of the wheelchair. Other program settings could cause the wheelchair to tip over resulting in serious injury to the user and/or damage to the surrounding property. If any individual other than a qualified technician performs any work on these units, the warranty is void.

TIRE PRESSURE

DO NOT USE YOUR WHEELCHAIR UNLESS IT HAS THE PROPER TIRE PRESSURE (P.S.I.) - OTHERWISE THE WHEELCHAIR MAY NOT DRIVE CORRECTLY, STOP CORRECTLY OR MAY EXPERIENCE ERRATIC PERFORMANCE.

Maintain tire pressure at 30 p.s.i.

DO NOT overinflate the tires. Failure to follow these suggestions may cause the tire to explode and cause bodily harm. The recommended tire pressure is listed on the side wall of the tire.

OPERATION INFORMATION

Invacare products are specifically designed and manufactured for use in conjunction with Invacare accessories. Accessories designed by other manufacturers have not been tested by Invacare and are not recommended for use with Invacare products.

Performance adjustments should only be made by professionals of the healthcare field or persons fully conversant with this process and the driver's capabilities. Incorrect settings could cause injury to the driver, bystanders, damage to the chair and to surrounding property.

After the wheelchair has been set-up, check to make sure that the wheelchair performs to the specifications entered during the set-up procedure. If the wheelchair does NOT perform to specifications, turn the wheelchair Off immediately and reenter set-up specifications. Repeat this procedure until the wheelchair performs to specifications.

ALWAYS shift your weight in the direction you are turning. DO NOT shift your weight in the opposite direction of the turn. Shifting your weight in the opposite direction of the turn may cause the inside drive wheel to lose traction and the wheelchair to tip over.

DO NOT tip the wheelchair over without assistance.

Anti-tippers MUST be used at all times. When outdoors on wet, soft ground or gravel surfaces, anti-tippers may not provide the same level of protection against tip over. Extra caution MUST be observed when traversing such surfaces.

DO NOT shift your weight or sitting position toward the direction you are reaching as the wheelchair may tip over.

DO NOT attempt to reach objects if you have to move forward in the seat.

DO NOT engage or disengage the motor engagement handles until the power is in the Off position.

DO NOT attempt to transfer into or out of the wheelchair without the motor engagement handles in the engaged (horizontal) position.

DO NOT operate on roads, streets or highways.

DO NOT climb, go up or down ramps or traverse slopes greater than 6°.

DO NOT attempt to move up or down an incline with a water, ice or oil film.

DO NOT attempt to drive over curbs or obstacles. Doing so may cause your wheelchair to turn over and cause bodily harm or damage to the chair.

DO NOT leave the power button in the On position when entering or exiting your wheelchair.

DO NOT stand on the frame of the wheelchair.

DO NOT stand on the flip-up footboard, otherwise damage may occur. When getting in or out of the wheelchair, make sure that the flip-up footboard is in the upward position.

Keep fingers and hands clear of the drive wheel.

ALWAYS wear your seat positioning strap.

The seat positioning strap is a positioning belt only. It is not designed for use as a safety device withstanding high stress loads such as auto or aircraft safety belts. If signs of wear appear, belt MUST be replaced immediately.

The basket under the seat is designed for light items such as jackets and umbrellas. DO NOT overload the basket.

Ensure that the items stored in the basket are fully contained within the basket - otherwise they could become entangled with the friction drive and may cause injury to the user or damage the wheelchair.

Before performing any maintenance, adjustment or service verify that on/off switch on the joystick is in the off position.

Avoid storage or use near external flame or combustible products.

ACCESSORIES

EXTREME care should be exercised when using oxygen in close proximity to electric circuits and other combustible materials. Contact your oxygen supplier for instruction in the use of oxygen.

BATTERIES

The warranty and performance specifications contained in this manual are based on the use of deep cycle gel cell batteries. Invacare strongly recommends their use as the power source for this unit.

Carefully read battery/battery charger information prior to installing, servicing or operating your wheelchair.

CHARGING BATTERIES

NEVER attempt to recharge the batteries by attaching cables directly to the battery terminals.

DO NOT attempt to recharge the batteries and operate the wheelchair at the same time.

DO NOT operate wheelchair with extension cord attached to the AC cable.

DO NOT attempt to recharge the batteries when the wheelchair has been exposed to ANY type of moisture.

DO NOT attempt to recharge the batteries when the wheelchair is outside.

DO NOT sit in the wheelchair while charging the batteries.

READ and CAREFULLY follow the manufacturer's instructions for each charger (supplied or purchased). If charging instructions are not supplied, consult a qualified technician for proper procedures.

When using an extension cord, use only a three (3) wire extension cord having at least 16 AWG (American Wire Gauge) wire and the same or higher electrical rating as the device being connected. Use of improper extension cord could result in risk of fire and electric shock.

Ensure the pins of the extension cord plug are the same number, size, and shape as those on the charger.

DO NOT under any circumstances cut or remove the round grounding plug from the charger AC cable plug or the extension cord plug.

Three (3) prong to two (2) prong adapters should not be used. Use of three (3) prong adapters can result in improper grounding and present a shock hazard to the user.

GROUNDING INSTRUCTIONS

DO NOT, under any circumstances, cut or remove the round grounding prong from any plug used with or for Invacare products. Some devices are equipped with three-prong (grounding) plugs for protection against possible shock hazards and fire. Where a two-prong wall receptacle is encountered, it is the personal responsibility and obligation of the customer to contact a qualified electrician and have the two-prong receptacle replaced with a properly grounded three-prong wall receptacle in accordance with the National Electrical Code. If you must use an extension cord, use ONLY a three-wire extension cord having the same or higher electrical rating as the device being connected. In addition, Invacare has placed RED/ORANGE warning tags on some equipment. DO NOT remove these tags.

RAIN TEST

Invacare has tested its power wheelchairs in accordance with ISO 7176 “Rain Test.” This provides the end user or his/her assistant sufficient time to remove his/her power wheelchair from a rain storm and retain wheelchair operation.

DO NOT leave power wheelchair in a rain storm of any kind.

DO NOT use power wheelchair in a shower.

DO NOT store power wheelchair in a damp area for an extended period of time.

Direct exposure to excessive rain or dampness may cause the chair to malfunction electrically and mechanically, may cause the chair to prematurely rust or may damage the upholstery.

Check to ensure that the battery pack is securely fastened, that all electrical connections are secure at all times and joystick boot is NOT torn or cracked where water can enter.

DO NOT use the wheelchair if the joystick boot is torn or cracked. If the joystick boot becomes torn or cracked, replace IMMEDIATELY.

WEIGHT TRAINING

Invacare DOES NOT recommend the use of its wheelchairs as a weight training apparatus. Invacare wheelchairs have NOT been designed or tested as a seat for any kind of weight training. If occupant uses said wheelchair as a weight training apparatus, Invacare shall NOT be liable for bodily injury and the warranty is void.

WEIGHT LIMITATION

The At'm wheelchairs have a weight limitation of 250 lbs.

SECTION 2—EMI INFORMATION

⚠ WARNING

CAUTION: IT IS VERY IMPORTANT THAT YOU READ THIS INFORMATION REGARDING THE POSSIBLE EFFECTS OF ELECTROMAGNETIC INTERFERENCE ON YOUR POWERED WHEELCHAIR.

Electromagnetic Interference (EMI) From Radio Wave Sources

Powered wheelchairs and motorized scooters (in this text, both will be referred to as powered wheelchairs) may be susceptible to electromagnetic interference (EMI), which is interfering electromagnetic energy (EM) emitted from sources such as radio stations, TV stations, amateur radio (HAM) transmitters, two way radios, and cellular phones. The interference (from radio wave sources) can cause the powered wheelchair to release its brakes, move by itself, or move in unintended directions. It can also permanently damage the powered wheelchair's control system. The intensity of the interfering EM energy can be measured in volts per meter (V/m). Each powered wheelchair can resist EMI up to a certain intensity. This is called its "immunity level." The higher the immunity level, the greater the protection. At this time, current technology is capable of achieving at least a 20 V/m immunity level, which would provide useful protection from the more common sources of radiated EMI.

There are a number of sources of relatively intense electromagnetic fields in the everyday environment. Some of these sources are obvious and easy to avoid. Others are not apparent and exposure is unavoidable. However, we believe that by following the warnings listed below, your risk to EMI will be minimized.

The sources of radiated EMI can be broadly classified into three types:

- 1) Hand-held Portable transceivers (transmitters-receivers with the antenna mounted directly on the transmitting unit. Examples include: citizens band (CB) radios, "walkie talkie", security, fire and police transceivers, cellular telephones, and other personal communication devices).

NOTE: Some cellular telephones and similar devices transmit signals while they are ON, even when not being used.

- 2) Medium-range mobile transceivers, such as those used in police cars, fire trucks, ambulances and taxis. These usually have the antenna mounted on the outside of the vehicle; and
- 3) Long-range transmitters and transceivers, such as commercial broadcast transmitters (radio and TV broadcast antenna towers) and amateur (HAM) radios.

NOTE: Other types of hand-held devices, such as cordless phones, laptop computers, AM/FM radios, TV sets, CD players, cassette players, and small appliances, such as electric shavers and hair dryers, so far as we know, are not likely to cause EMI problems to your powered wheelchair.

⚠ WARNING**Powered Wheelchair Electromagnetic Interference (EMI)**

Because EM energy rapidly becomes more intense as one moves closer to the transmitting antenna (source), the EM fields from hand-held radio wave sources (transceivers) are of special concern. It is possible to unintentionally bring high levels of EM energy very close to the powered wheelchair's control system while using these devices. This can affect powered wheelchair movement and braking. Therefore, the warnings listed below are recommended to prevent possible interference with the control system of the powered wheelchair.

Electromagnetic interference (EMI) from sources such as radio and TV stations, amateur radio (HAM) transmitters, two-way radios, and cellular phones can affect powered wheelchairs and motorized scooters.

FOLLOWING THE WARNINGS LISTED BELOW SHOULD REDUCE THE CHANCE OF UNINTENDED BRAKE RELEASE OR POWERED WHEELCHAIR MOVEMENT WHICH COULD RESULT IN SERIOUS INJURY.

- 1) Do not operate hand-held transceivers (transmitters receivers), such as citizens band (CB) radios, or turn ON personal communication devices, such as cellular phones, while the powered wheelchair is turned ON;
- 2) Be aware of nearby transmitters, such as radio or TV stations, and try to avoid coming close to them;
- 3) If unintended movement or brake release occurs, turn the powered wheelchair OFF as soon as it is safe;
- 4) Be aware that adding accessories or components, or modifying the powered wheelchair, may make it more susceptible to EMI (NOTE: There is no easy way to evaluate their effect on the overall immunity of the powered wheelchair); and
- 5) Report all incidents of unintended movement or brake release to the powered wheelchair manufacturer, and note whether there is a source of EMI nearby.

Important Information

- 1) 20 volts per meter (V/m) is a generally achievable and useful immunity level against EMI (as of May 1994) (the higher the level, the greater the protection);
- 2) The immunity level of this product is unknown.

Modification of any kind to the electronics of this wheelchair as manufactured by Invacare may adversely affect the RFI immunity levels.

SECTION 3—SAFETY/HANDLING OF WHEELCHAIRS

“Safety and Handling” of the wheelchair requires the close attention of the wheelchair user as well as the assistant. This manual points out the most common procedures and techniques involved in the safe operation and maintenance of the wheelchair. It is important to practice and master these safe techniques until you are comfortable in maneuvering around the frequently encountered architectural barriers.

Use this information only as a “basic” guide. The techniques that are discussed on the following pages have been used successfully by many.

Individual wheelchair users often develop skills to deal with daily living activities that may differ from those described in this manual. Invacare recognizes and encourages each individual to try what works best for him/her in overcoming architectural obstacles that they may encounter, however ALL WARNINGS and CAUTIONS given in this manual MUST be followed. Techniques in this manual are a starting point for the new wheelchair user and assistant with “safety” as the most important consideration for all.

STABILITY AND BALANCE

WARNING

ALWAYS wear your seat positioning strap.

The seat positioning strap is a positioning belt ONLY. It is not designed for use as a safety device withstanding high stress loads such as auto or aircraft safety belts. If signs of wear appear, belt MUST be replaced immediately.

To assure stability and proper operation of your wheelchair, you must at all times maintain proper balance. Your wheelchair has been designed to remain upright and stable during normal daily activities as long as you do not move beyond the center of gravity. DO NOT lean forward out of the wheelchair any further than the length of the armrests.

COPING WITH EVERYDAY OBSTACLES

Coping with the irritation of everyday obstacles can be alleviated somewhat by learning how to manage your wheelchair. Keep in mind your center of gravity to maintain stability and balance.

A NOTE TO WHEELCHAIR ASSISTANTS

⚠ WARNING

DO NOT attempt to lift the wheelchair by any removable (detachable) parts. Lifting by means of removable (detachable) parts of the wheelchair may result in injury to the user and/or damage to the wheelchair.

When assistance to the wheelchair user is required, remember to use good body mechanics. Keep your back straight and bend your knees whenever tipping the wheelchair or traversing curbs or other impediments.

When learning a new assistance technique, have an experienced assistant help you before attempting it alone.

LIFTING/STAIRWAYS

⚠ WARNING

DO NOT attempt to move an occupied power wheelchair between floors using a stairway. Use an elevator to move an occupied power wheelchair between floors. If moving a power wheelchair between floors by means of a stairway, the occupant MUST be removed and transported independently of the power wheelchair.

Extreme caution is advised when it is necessary to move an unoccupied power wheelchair up or down the stairs. Invacare recommends using two (2) assistants and making thorough preparations.

DO NOT attempt to lift the wheelchair by any removable (detachable) parts. Lifting by means of any removable (detachable) parts of a wheelchair may result in injury to the user or damage to the wheelchair.

The weight of the wheelchair without the user is approximately 74 lbs. Use proper lifting techniques (lift with your legs) to avoid injury.

Follow this procedure for moving the wheelchair between floors when an elevator is NOT available or lifting the wheelchair is necessary:

NOTE: When using a stairway to move the wheelchair, seat and any accessories, move all wheelchair components away from the stairway prior to reassembly.

1. Remove the occupant from the wheelchair.
 2. Transfer the wheelchair to the desired location. Refer to Transporting the Wheelchair on page 43.
-

⚠ WARNING

DO NOT use an escalator to move a wheelchair between floors. Serious bodily injury may occur.

PERCENTAGE OF WEIGHT DISTRIBUTION

⚠ WARNING

DO NOT attempt to reach objects if you have to move forward in the seat or pick them up from the floor by reaching down between your knees.

Proper positioning is essential for your safety. When reaching, leaning, bending or bending forward, it is important to use the casters as a tool to maintain stability and balance.

Many activities require the wheelchair user to reach, bend and transfer in and out of the wheelchair. These movements will cause a change to the normal balance, center of gravity, and weight distribution of the wheelchair. To determine and establish your particular safety limits, practice bending, reaching and transferring activities in several combinations in the presence of a qualified healthcare professional **BEFORE** attempting active use of the wheelchair.

REACHING, LEANING AND BENDING - FORWARD

⚠ WARNING

DO NOT attempt to reach objects if you have to move forward in the seat or pick them up from the floor by reaching down between your knees.

NOTE: For this procedure, refer to FIGURE 3.1.

Position the front casters so that they are extended as far forward as possible and engage motor release levers.

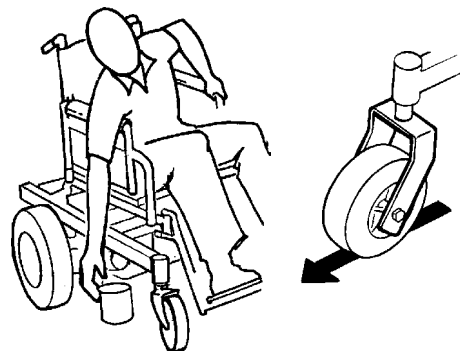


FIGURE 3.1F - REACHING, LEANING AND BENDING - FORWARD

REACHING AND BENDING - BACKWARD

⚠ WARNING

DO NOT lean over the top of the back upholstery. This will change your center of gravity and may cause you to tip over.

NOTE: For this procedure, refer to FIGURE 3.2.

Position wheelchair as close as possible to the desired object. Point the front casters rearward to create the longest possible wheelbase. Reach back only as far as your arm will extend without changing your sitting position.



FIGURE 3.2 - REACHING AND BENDING - BACKWARD

SECTION 4—SAFETY INSPECTION/ TROUBLESHOOTING

NOTE: Every six (6) months or as necessary take your wheelchair to a qualified dealer for a thorough inspection and servicing. Regular cleaning will reveal loose or worn parts and enhance the smooth operation of your wheelchair. To operate properly and safely, your wheelchair must be cared for just like any other vehicle. Routine maintenance will extend the life and efficiency of your wheelchair.

SAFETY INSPECTION CHECKLISTS

△ CAUTION

As with any vehicle, wheels and tires should be checked periodically for cracks and wear and should be replaced as necessary.

Initial adjustments should be made to suit your personal body structure needs and preference. Thereafter follow these maintenance procedures:

INSPECT/ADJUST INITIALLY

- Check pneumatic tires for proper inflation.
- Ensure that the wheelchair rolls straight (no excessive drag or pull to one side).
- Ensure all clothing guard fasteners are secure.
- Clean seat upholstery and armrests.
- Ensure armrest pads sit flush against arm tubes.
- Ensure seat is secured to wheelchair frame.
- Ensure seat release latches are functional. Replace if necessary.
- Inspect seat upholstery for rips or sagging.
- Ensure no excessive side movement or binding occurs when drive wheels are lifted and spun when disengaged (freewheeling).
- Ensure caster assembly has proper tension when caster is spun. Caster should come to a gradual stop.
- Loosen/tighten caster locknut if wheel wobbles noticeably or binds to a stop.
- Ensure all caster/wheel/fork/headtube fasteners are secure.
- Inspect tires for flat spots and wear.
- Check pneumatic tires for proper inflation.

INSPECT/ADJUST WEEKLY

- Check pneumatic tires for proper inflation.
- Ensure all caster/wheel/fork/headtube fasteners are secure.
- Inspect tires for flat spots and wear.

INSPECT/ADJUST MONTHLY

- Ensure no excessive side movement or binding occurs when drive wheels are lifted and spun when disengaged (freewheeling).
- Ensure caster assembly has proper tension when caster is spun. Caster should come to a gradual stop.
- Loosen/tighten caster locknut if wheel wobbles noticeably or binds to a stop.
- Ensure all caster/wheel/fork/headtube fasteners are secure.
- Inspect for any loose hardware on the wheelchair.
- Inspect the seat positioning strap for signs of wear. Replace if worn or damaged.
- Ensure that the buckle on the seat positioning strap latches. Replace if necessary.
- Verify that the hardware that attaches the seat positioning strap to the seat frame is secure and undamaged. Replace if necessary.

INSPECT/ADJUST PERIODICALLY

- Ensure all clothing guard fasteners are secure.
- Clean seat upholstery and armrests.
- Ensure armrest pads sit flush against arm tubes.
- Ensure seat is secured to wheelchair frame.
- Ensure seat release latches are functional. Replace if necessary.
- Inspect seat upholstery for rips or sagging.
- Inspect charger AC power cord for damage. Replace if necessary.

TROUBLESHOOTING GUIDE

SYMPTOM	PROBABLE CAUSE	SOLUTIONS
Erratic performance of wheelchair (driving uphill, increase in braking distance).	Low tire pressure.	Inflate tires to the proper tire pressure.
Wheelchair will not drive.	Low tire pressure. Motor engagement handles are disengaged. Batteries require charging. Charger plugged in. Circuit breaker tripped.	Inflate tires to the proper tire pressure. Engage motor engagement handles. Charge batteries. Make sure the setting on the charger is correct. Unplug charger from wall outlet before operating the wheelchair. Press the reset button. Refer to Resetting the Circuit Breaker on page 28.
Batteries draw excessive current when charging.	Battery failure. Electrical malfunction.	Have batteries checked for shorted cell. Replace if necessary. Contact Dealer/Invacare.
Battery indicator shows low charge level immediately after charging.	Batteries weak, won't hold charge. Electrical malfunction. Charger malfunction.	Replace Batteries. Contact Dealer/Invacare. Replace charger. Contact Dealer/Invacare.
Motor "chatters" or runs irregularly.	Electrical malfunction.	Contact Dealer/Invacare.
Only one (1) drive wheel turns.	Electrical malfunction. One (1) motor is disengaged.	Contact Dealer/Invacare for service. Engage motor engagement handle.
Joystick erratic or does not respond as desired.	Electrical malfunction. Controller programmed improperly.	Contact Dealer/Invacare for service. Reprogram controller (Refer to electronics manual supplied with wheelchair).
Wheelchair does not respond to commands.	Poor battery terminal connection.	Have terminals cleaned.
Power indicator off - even after recharging.	Electrical malfunction.	Contact Dealer/Invacare for service.

NOTE: For additional troubleshooting information and explanation of error codes, refer to the Electronics Manual supplied with each wheelchair.

SECTION 5—WHEELCHAIR OPERATION

⚠ WARNING

After **ANY** adjustments, repair or service and **BEFORE** use, make sure that all attaching hardware is tightened securely - otherwise injury or damage may result.

DO NOT USE YOUR WHEELCHAIR UNLESS IT HAS THE PROPER TIRE PRESSURE (P.S.I.) - OTHERWISE THE WHEELCHAIR MAY NOT DRIVE CORRECTLY, STOP CORRECTLY OR MAY EXPERIENCE ERRATIC PERFORMANCE.

DO NOT overinflate the tires. Failure to follow these suggestions may cause the tire to explode and cause bodily harm. The recommended tire pressure is listed on the side wall of the tire.

Set-up/programming of the Electronic Control Unit is to be performed **ONLY** by a qualified technician. The fine tuning adjustments of the controller may affect other activities of the wheelchair. Damage to the equipment could occur under these circumstances. **IF UNQUALIFIED INDIVIDUALS PERFORM ANY WORK ON THESE UNITS, THE WARRANTY IS VOID.**

OPERATING THE WHEELCHAIR

NOTE: For this procedure, refer to FIGURE 5.1.

TURNING THE POWER ON/OFF

1. To turn the power on, press the on/off button.

NOTE: After turning power on, all indicators will light briefly and the display gauge will indicate one of the following:

- A. *The Current Battery Charge - Information gauge shows all LED's lit or partial LED's lit. Refer to the table on page 27.*
- B. *Out Of Neutral At Power Up - Information Gauge shows all LED's flashing slowly. This occurs when the power is turned on when the joystick is out of neutral. This feature prevents sudden and unexpected movements of the power chair.*

2. To turn the power off, press the on/off button again.

USING THE JOYSTICK TO DRIVE THE CHAIR

The joystick is located at the front of the joystick housing and provides smooth control of speed and direction. It is equipped with 360 degrees of mobility for ease of operation. The joystick is spring-loaded, and automatically returns to the upright (neutral) position when released. Pushing the joystick in a given direction causes the chair to move in that direction.

The joystick has proportional drive control, meaning that the further it is pushed from the upright (neutral) position, the faster the wheelchair moves. The maximum speed, however, is limited by the setting of the speed-control knob.

To slow the wheelchair to a stop, simply release the joystick. The wheelchair has automatic speed and direction compensation to minimize corrections.

When first learning to drive, select a SLOW speed and try to drive the wheelchair AS SLOWLY as possible by pushing the joystick slightly forward. This exercise will help you learn to utilize the full potential of the proportional control and allow you to start and stop smoothly.

To drive the wheelchair, perform the following:

1. Adjust speed control switch to the appropriate setting.
2. Turn the power on. Refer to [Turning the Power On/Off](#) on page 24.
3. Move the joystick in the following manner:

MOVEMENT	ACTION
FORWARD	Push forward on the joystick.
REVERSE	Pull back on the joystick.
Turn RIGHT	Move the joystick RIGHT.
Turn LEFT	Move the joystick LEFT.
STOP	Release the joystick and the wheelchair will quickly slow down.

USING THE HORN

NOTE: For this procedure, refer to FIGURE 5.1.

1. Press the horn button located on the joystick housing.

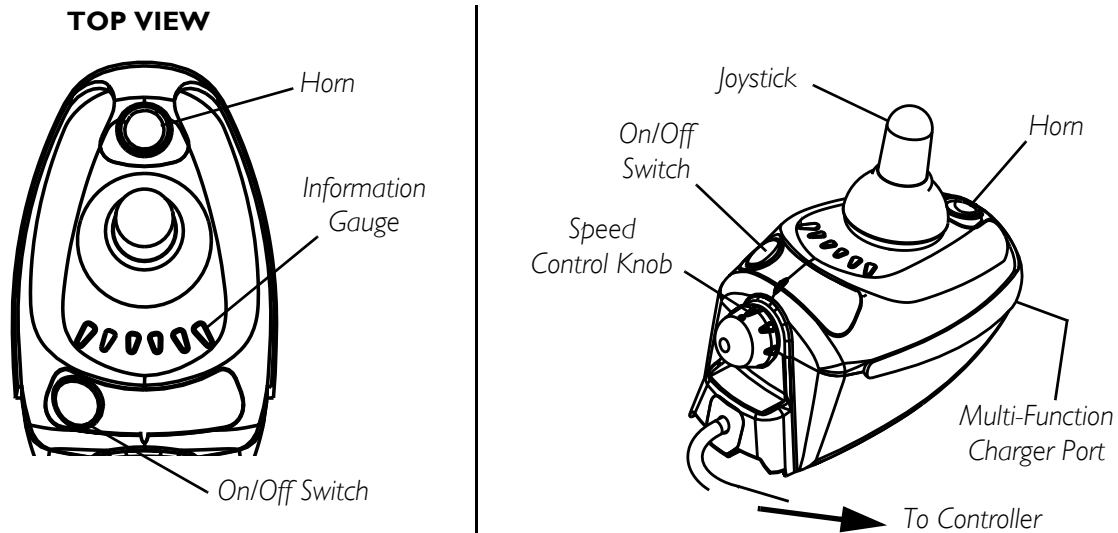


FIGURE 5.1 - OPERATING THE WHEELCHAIR

JOYSTICK SWITCHES AND INDICATORS

NOTE: For the following information, refer to FIGURE 5.1.

ON/OFF BUTTON

This button is located on the joystick housing.

SPEED CONTROL KNOB

The speed control knob is located on the back of the joystick housing. This rotary knob is used for controlling the speed and acceleration of the wheelchair.

1. Turn the knob clockwise to increase the speed of the wheelchair.
2. Turn the knob counter-clockwise to decrease the speed of the wheelchair.

JOYSTICK

The joystick has proportional drive control, meaning that further the wheelchair is pushed from the upright (neutral) position, the faster it moves. Your top speed, however, is limited by the setting of the speed control knob and programmed settings.

To slow the wheelchair to a stop, simply release the joystick. The wheelchair has automatic speed and direction compensation to minimize corrections.


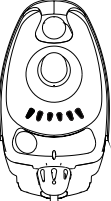


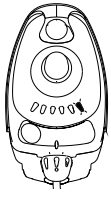


INFORMATION GAUGE DISPLAY

The Information Gauge Display is located on the joystick housing. It provides the following information to the user on the status of the wheelchair -

1. Power is on.
2. True state-of-battery-charge, including notification of when the battery requires charging:
 - A. GREEN LED is lit, indicating well charged batteries.
 - B. Only AMBER LEDs are lit, indicating batteries are moderately charged. Recharge batteries before taking a long trip.
 - C. Only RED LED is lit, indicating batteries are running out of charge. Recharge batteries as soon as possible.
3. Program, inhibit or charge modes.
4. Fault indication (Flash Codes).

The Information Gauge display also serves as a system diagnostic device when a fault is detected by the control module. A specific number of flashes of the LEDs indicate the type of fault detected. Refer to the following table of the diagnostic indications of the wheelchair status.

NOTE: The joystick must be in the neutral position for an accurate reading of battery charge.

DISPLAY	DESCRIPTION	DEFINITION	COMMENTS
	All LEDs are off.	Power is Off.	
	All LEDs are on.	Power is On.	Fewer than three (3) LEDs on implies reduced battery charge.
	Left RED LED is flashing.	Battery charge is low.	The batteries should be charged as soon as possible.
	Left to Right “chase” alternating with steady display.	Joystick is in programming, inhibit and/or charging mode.	The steady LEDs indicate the current state of the battery charge.
	Right GREEN LED is flashing.	Joystick is in Speed Limit mode.	The current state of battery charge will be displayed at the same time.
	All LEDs are flashing slowly.	Joystick has detected Out-of-Neutral-at-Power-Up mode.	Release the joystick back to Neutral.
	All LEDs are flashing quickly.	Joystick has detected a fault.	Joystick uses Flash codes to indicate faults. Refer to the electronics manual (Part Number 1110532).

MULTI FUNCTION CHARGER PORT

⚠ WARNING

Set-up/programming of the Electronic Control Unit is to be performed only by a qualified technician. The final adjustments of the controller may affect other activities of the wheelchair. Damage to the equipment could occur under these circumstances. If unqualified individuals perform any work on these units, the warranty is void.

FRONT VIEW OF JOYSTICK

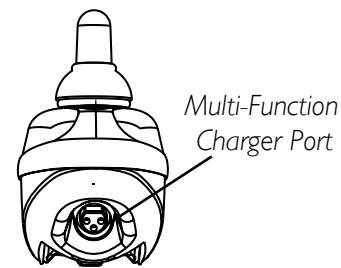


FIGURE 5.2 - MULTI FUNCTION CHARGER PORT

The multi function charger port is located at the front of the joystick housing. This provides easy access for charging the wheelchair batteries. This port also serves as the Remote Programmer Communication connection.

RESETTING THE CIRCUIT BREAKER

⚠ WARNING

NEVER defeat or bypass the circuit breaker. **ONLY** replace with a circuit breaker of the same rating.

NOTE: For this procedure, refer to FIGURE 5.3.

1. Remove the battery pack from the wheelchair base. Refer to Removing/Installing the Battery Pack on page 35.
2. Open the battery pack by performing the following -
 - A. Grasp the side flaps and pull up.
 - B. Grasp the front flap and pull up.
3. To reset - press the circuit breaker reset button located inside the protector ring on top of circuit breaker.
4. Close the battery pack by performing the following -
 - A. Fold down the front flap and press to engage the hook and loop straps.
 - B. Fold down the side flaps and press to engage the hook and loop straps.

NOTE: Ensure that the hook and loop straps are securely fastened before lifting the battery pack.

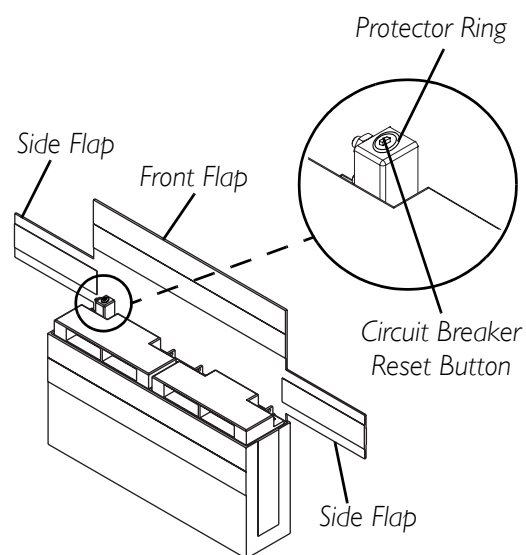


FIGURE 5.3 - RESETTING THE CIRCUIT BREAKER

SECTION 6—SEAT

⚠ WARNING

After ANY adjustments, repair or service and BEFORE use, make sure that all attaching hardware is tightened securely - otherwise injury or damage may result.

Before performing any maintenance, adjustment or service verify that On/Off switch on the joystick is in the Off position.

REMOVING/INSTALLING THE SEAT

NOTE: For this procedure, refer to FIGURE 6.1.

REMOVING

1. Disconnect the joystick. Refer to Disconnecting/Connecting the Joystick on page 32.
2. Remove the battery pack. Refer to Removing/Installing the Battery Pack on page 35.
3. Pull up the front seat release loop and tilt the seat back. Refer to Detail “A” of FIGURE 6.1.
4. Pull up the rear seat release cord with the other hand and lift the seat assembly off and away from the wheelchair base. Refer to Detail “B” of FIGURE 6.1.
5. Fold the seat assembly. Refer to Detail “C” of FIGURE 6.1.

INSTALLING

1. Lower the rear latches onto the rear crossbrace.

NOTE: An audible click is heard as the rear latches lock into place.

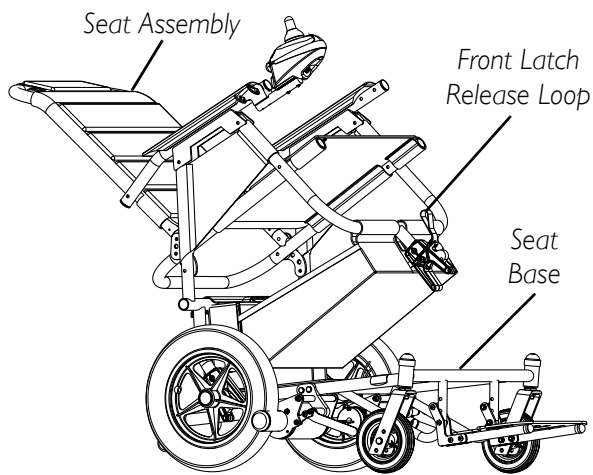
NOTE: Ensure both latches sit flush against the rear crossbrace. If not flush, lift the rear seat release cord, remove the seat and repeat STEP 1.

2. Tilt back seat assembly.
3. Unfold the seat assembly.
4. Lower the front latch onto the front cross brace until it locks in place.

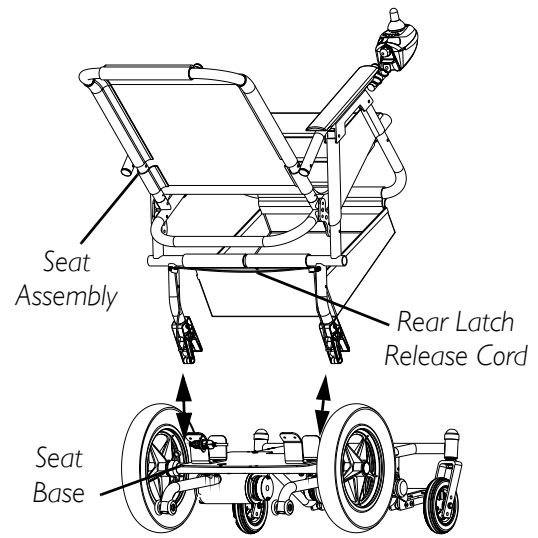
NOTE: An audible click is heard as the front latch locks into place.

5. Lift the seat assembly to ensure that the seat is secured to the wheelchair base.
6. Reinstall the battery pack. Refer to Removing/Installing the Battery Pack on page 35.
7. Reconnect the joystick. Refer to Disconnecting/Connecting the Joystick on page 32.

DETAIL "A" - SEAT TILTED BACK



DETAIL "B" - SEAT REMOVED



DETAIL "C" - FOLDING SEAT

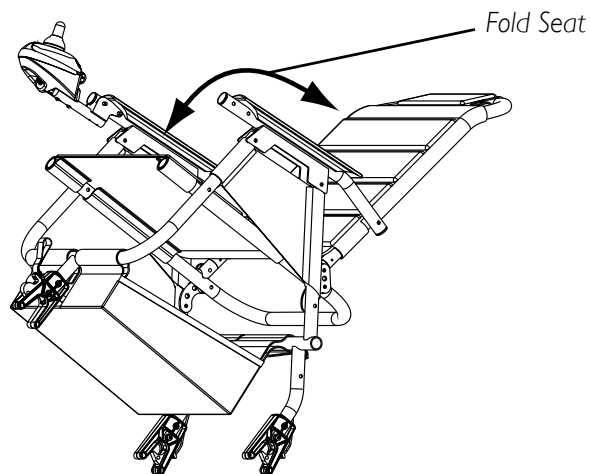


FIGURE 6.1 - REMOVING/INSTALLING THE SEAT

REPLACING SEAT POSITIONING STRAP

⚠ WARNING

ALWAYS wear your seat positioning strap.

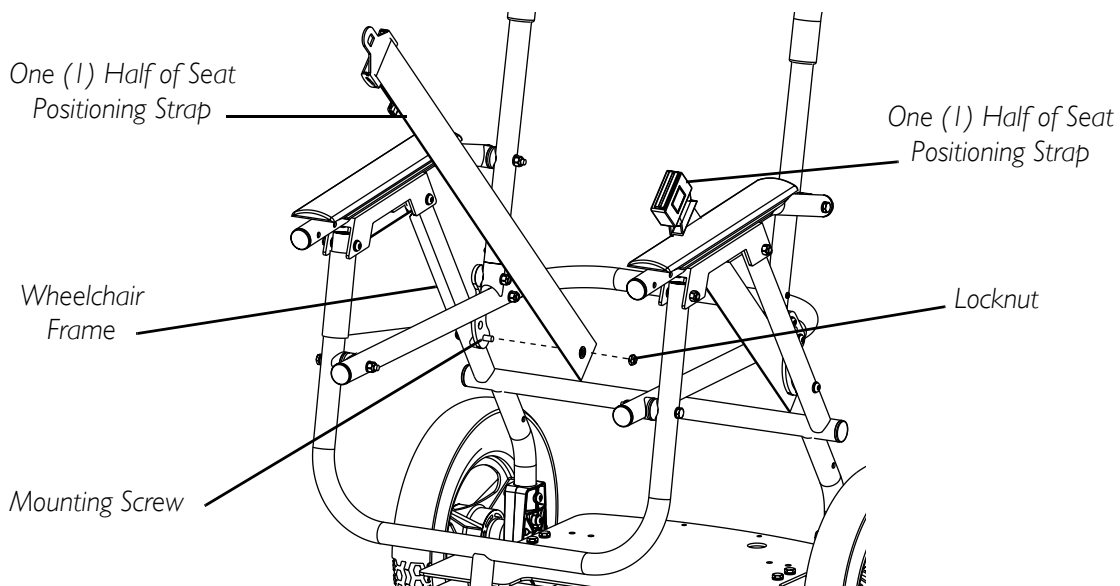
The seat positioning strap is a positioning belt **ONLY**. It is not designed for use as a safety device withstanding high stress loads such as auto or aircraft safety belts. If signs of wear appear, belt **MUST** be replaced immediately.

NOTE: For this procedure, refer to FIGURE 6.2.

1. Remove the locknut that secures one (1) half of the seat positioning strap to the wheelchair frame.
2. Slide the seat positioning strap half from the wheelchair frame.

NOTE: DO NOT remove the mounting screw.

3. Position one (1) new seat positioning strap half on the mounting screw.
4. Reinstall the locknut that secures the seat positioning strap half to the wheelchair frame.
5. Repeat STEPS 1- 4 for the other half of the seat positioning strap.



NOTE: DO NOT remove the mounting screw.

NOTE: Seat upholstery not shown for clarity.

FIGURE 6.2 - REPLACING SEAT POSITIONING STRAP

SECTION 7—JOYSTICK

⚠ WARNING

After **ANY** adjustments, repair or service and **BEFORE** use, make sure that all attaching hardware is tightened securely - otherwise injury or damage may result.

Before performing any maintenance, adjustment or service verify that On/Off switch on the joystick is in the **OFF** position.

DISCONNECTING/CONNECTING THE JOYSTICK

NOTE: For this procedure, refer to FIGURE 7.1.

DISCONNECTING

1. Pull the light GREY collar portion of the joystick connector and disengage it from the controller connector on the wheelchair.

CONNECTING

⚠ WARNING

The joystick connector and controller connector fit together in one way only; **DO NOT** force them together.

1. Hold the light GREY collar portion of the joystick connector with one hand and align it with the controller connector on the wheelchair.
2. Lightly push to engage the joystick connector and the controller connector.

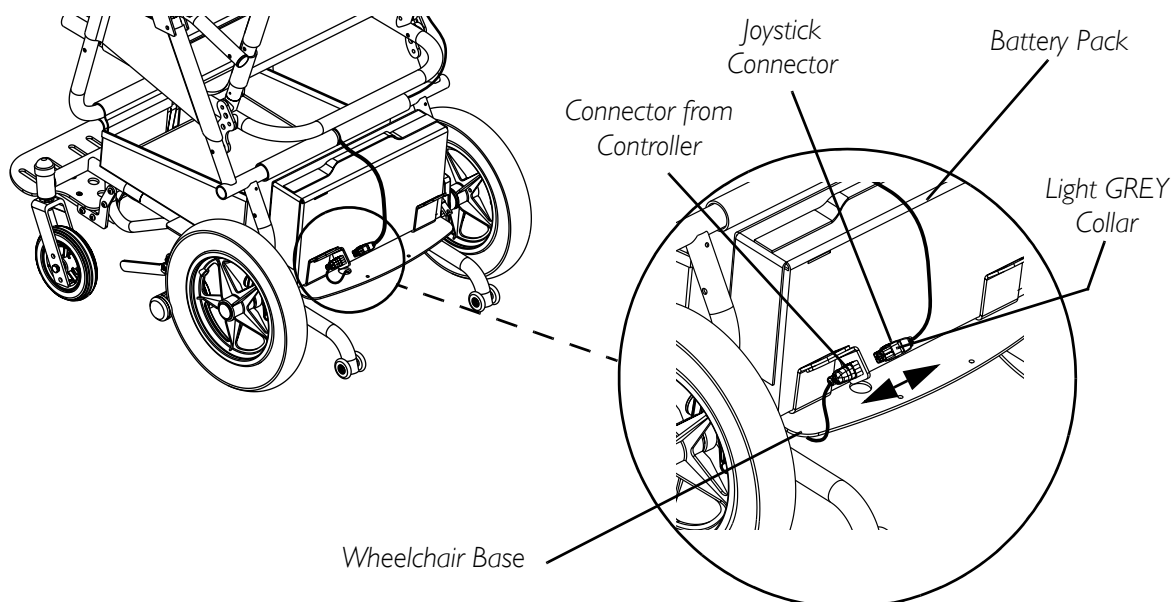


FIGURE 7.1 - DISCONNECTING/CONNECTING THE JOYSTICK

REPOSITIONING THE JOYSTICK

NOTE: For this procedure, refer to FIGURE 7.2.

1. Disconnect the joystick. Refer to Disconnecting/Connecting the Joystick on page 32.
2. Cut the tie-wraps that secure the joystick cable to the wheelchair arm and frame. Refer to Detail "A" of FIGURE 7.2.
3. Pull the hook and loop strap to open the basket upholstery flap.
4. Cut the tie wrap that secures the joystick cable to the wheelchair frame.
5. Remove the two quick-release pins that mount the joystick to the arm.
6. Remove the joystick and mounting bracket assembly.
7. Reposition the joystick and mounting bracket assembly on the opposite arm.
8. Align the mounting holes on the mounting bracket with the mounting holes on the arm.
9. Insert the two (2) quick-release pins through the mounting holes to secure the joystick to the arm.
10. Tie wrap the joystick cable to the wheelchair arm and frame.

NOTE: Route the joystick cable under the basket upholstery flap to prevent it from interfering with wheelchair motion.

11. Connect the joystick. Refer to Disconnecting/Connecting the Joystick on page 32.

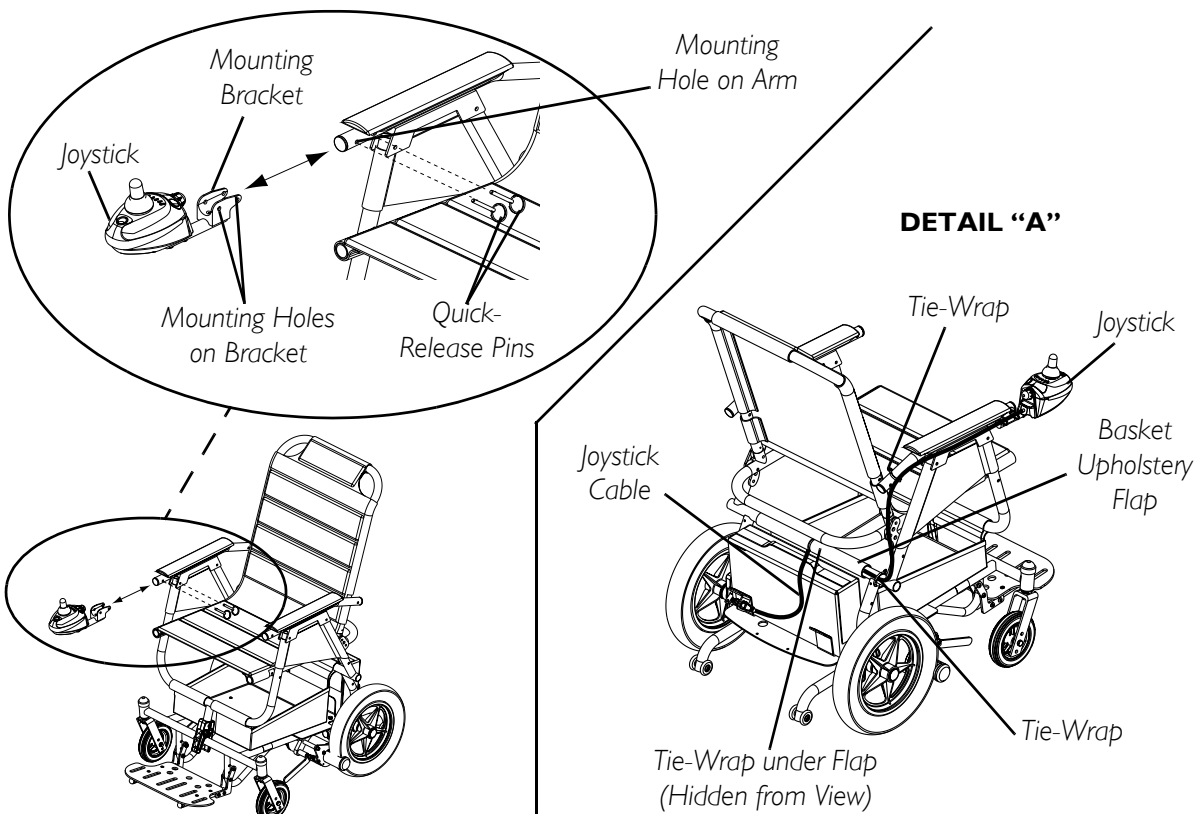


FIGURE 7.2 - REPOSITIONING THE JOYSTICK

SECTION 8—BATTERIES

WARNINGS FOR HANDLING AND REPLACING BATTERIES

⚠ WARNING

After **ANY** adjustments, repair or service and **BEFORE** use, make sure that all attaching hardware is tightened securely - otherwise injury or damage may result.

Make sure power to the wheelchair is off before performing this section.

Most batteries are not sold with instructions. However, warnings are frequently noted on the cell caps. Read them carefully, otherwise serious injury or damage may occur.

The use of rubber gloves and chemical goggles or face shields is recommended when working with batteries.

Invacare strongly recommends that battery installation and battery replacement **ALWAYS** be done by a qualified technician.

DO NOT tip the batteries. Keep the batteries in an upright position.

NEVER allow any of your tools and/or battery cable(s) to contact **BOTH** battery posts at the same time. An electrical short may occur and serious personal injury or damage may occur.

The **POSITIVE (+) RED** battery cable must connect to the **POSITIVE (+)** battery terminal, otherwise serious damage will occur to the electrical system.

NOTE: If there is battery acid in the bottom of the battery tray or on the sides of the battery(ies), apply baking soda to these areas to neutralize the battery acid. Before reinstalling the existing or new battery(ies), clean the baking soda from the battery tray or battery(ies) being sure to avoid contact with skin and eyes. Determine source of contamination. Never install/reinstall a battery with a cracked or otherwise damaged case.

RECOMMENDED BATTERY TYPE

⚠ CAUTION

Failure to use the correct battery size and/or voltage may cause damage to the wheelchair and give unsatisfactory performance.

This wheelchair uses two (2) M17-12 SLSM type batteries (FIGURE 8.1).

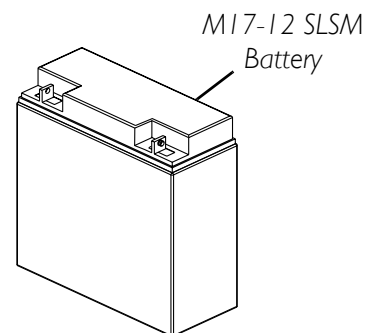


FIGURE 8.1 - RECOMMENDED BATTERY TYPE

REMOVING/INSTALLING THE BATTERY PACK

⚠ WARNING

Never unplug the battery cables by pulling on the wires. Unplug the battery cables by pulling on the connector **ONLY**. Otherwise injury or damage may result.

NOTE: For this procedure, refer to FIGURE 8.2.

NOTE: If there is battery acid in the bottom of the battery pack, tray or on the sides of the battery(ies), apply baking soda to these areas to neutralize the battery acid. Before reinstalling the existing or new battery(ies), clean the baking soda from the battery tray or battery(ies) being sure to avoid contact with skin and eyes. Determine source of contamination. Never install/reinstall a battery with a cracked or otherwise damaged case.

REMOVING

1. Verify the joystick on/off button is in the off position and disconnect the joystick. Refer to Disconnecting/Connecting the Joystick on page 32.
2. Disconnect the battery connector from the wheelchair (RED and BLACK connector).
3. Using the battery handle, lift the battery pack up and away from the wheelchair base.

INSTALLING

1. Verify the joystick on/off button is in the off position and disconnect the joystick. Refer to Disconnecting/Connecting the Joystick on page 32.
2. Position the battery pack into brackets located on the rear of the wheelchair.
3. Connect the battery connector to the connector on the rear of the wheelchair (RED and BLACK connector).
4. Connect the joystick. Refer to Disconnecting/Connecting the Joystick on page 32.

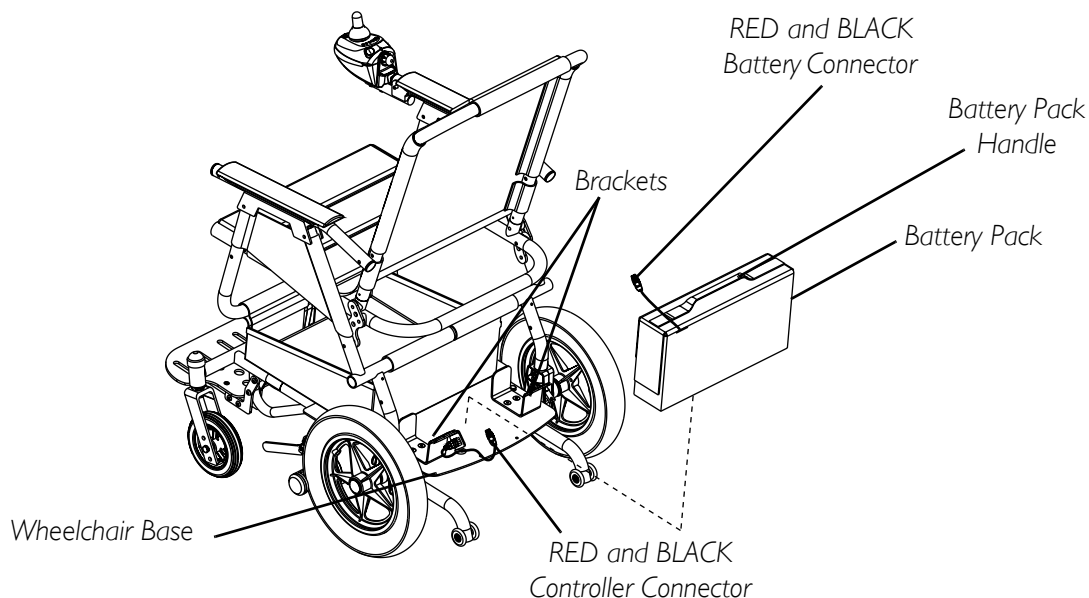


FIGURE 8.2 - REMOVING/INSTALLING THE BATTERY PACK

REMOVING/INSTALLING THE BATTERIES FROM/ INTO THE BATTERY PACK

NOTE: For this procedure, refer to FIGURE 8.3.

REMOVING

1. Remove the battery pack from the wheelchair. Refer to Removing/Installing the Battery Pack on page 35.
2. Open the battery pack by performing the following -
 - A. Grasp the side flaps and pull up.
 - B. Grasp the front flap and pull up.
3. Disconnect the wiring harness from the batteries in the following order -
 - A. NEGATIVE (-) BLACK battery cable from the NEGATIVE (-) battery terminal on the left battery.
 - B. POSITIVE (+) RED battery cable from POSITIVE (+) battery terminal/post on the right battery.
 - C. WHITE battery cable (jumper) from the POSITIVE (+) battery terminal/post on the left battery and the NEGATIVE (-) battery terminal/post on the right battery.
4. Remove the batteries from the battery pack.

INSTALLING

1. Install the batteries into the battery pack in the orientation shown in FIGURE 8.3.
2. Connect the wiring harness to the batteries in the following order -
 - A. NEGATIVE (-) BLACK battery cable to the NEGATIVE (-) battery terminal on the left battery.
 - B. POSITIVE (+) RED battery cable to POSITIVE (+) battery terminal/post on the right battery.
 - C. WHITE battery cable (jumper) to the POSITIVE (+) battery terminal/post on the left battery and the NEGATIVE (-) battery terminal/post on the right battery.
3. Slide the red and black battery connector out of the battery pack in the slit provided on the front flap.
4. Close the battery pack by performing the following -
 - A. Fold down the front flap and press to engage the hook and loop straps.
 - B. Fold down the side flaps and press to engage the hook and loop straps.

NOTE: Ensure that the hook and loop straps are securely fastened before lifting the battery pack.

5. Install the battery pack on the wheelchair. Refer to Removing/Installing the Battery Pack on page 35.

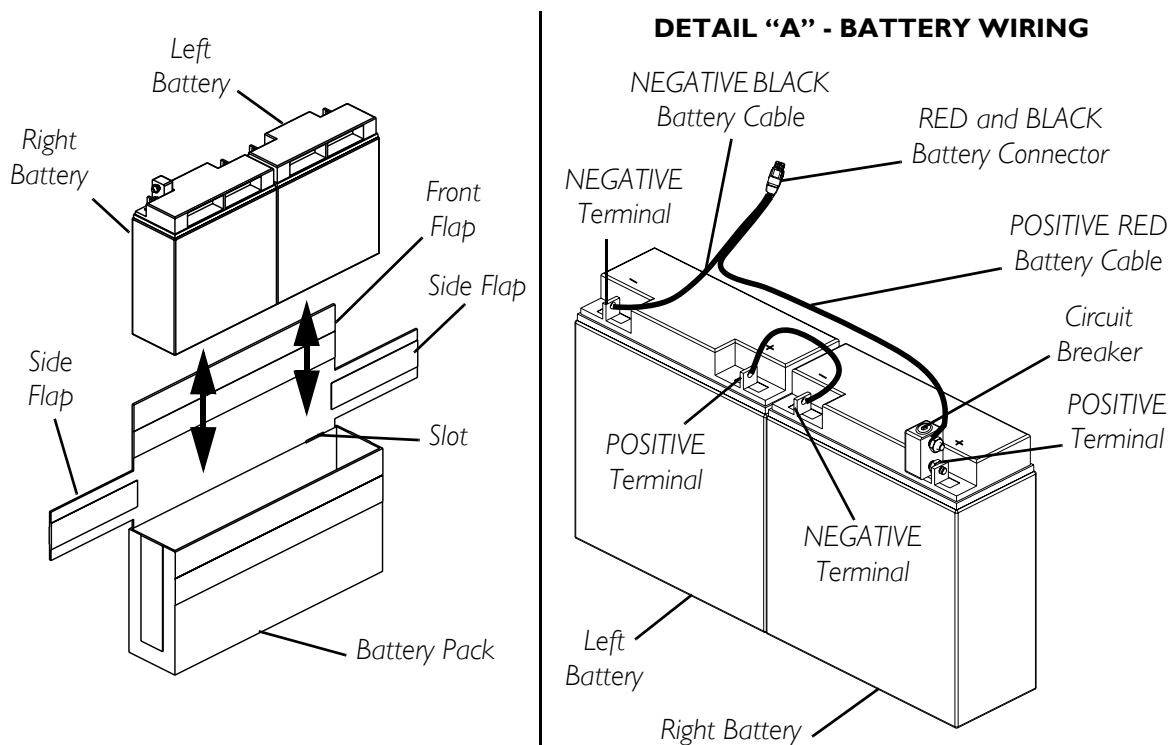


FIGURE 8.3 - REMOVING/INSTALLING THE BATTERIES FROM/INTO THE BATTERY PACK

CHARGING BATTERIES

⚠ WARNING

Never attempt to recharge the batteries by attaching cables directly to the battery terminals.

DO NOT attempt to recharge the batteries and operate the wheelchair at the same time.

DO NOT attempt to recharge the batteries when the wheelchair has been exposed to **ANY** type of moisture.

DO NOT attempt to recharge the batteries when the wheelchair is outside.

DO NOT sit in the wheelchair while recharging the batteries.

⚠ CAUTION

New batteries **MUST** be fully charged prior to initial use of the wheelchair.

Always charge new batteries before initial use or battery life will be reduced.

As a general rule, you should recharge your batteries as frequently as possible to assure the longest possible life and to minimize required charging time. Plan to recharge them when you do not anticipate using the wheelchair.

Basic concepts which will help you understand this automatic process are:

The amount of electrical current drawn within a given time to charge a battery is called “charge rate”. If, due to usage, the charge stored in the battery is low, the charge rate is high. As a charge builds up, the charge rate is reduced, and the battery charger rate decreases to a “trickle charge”.

NOTE: If the batteries need to be charged more often or take longer to charge than normal, they may need to be replaced. Contact a qualified technician.

CHARGING USING AN INDEPENDENT CHARGER PLUGGED INTO THE JOYSTICK

⚠ WARNING

READ and CAREFULLY follow the individual instructions for each charger (supplied or purchased). If charging instructions are not supplied, consult a qualified technician for proper procedures.

⚠ CAUTION

Only use a charger approved by Invacare when charging through the joystick on this wheelchair model.

DO NOT use an independent charger with an output rating of over 8A (Amps). Otherwise, damage may occur.

NOTE: For this procedure, refer to FIGURE 8.4.

NOTE: The charger port located on the front of the joystick requires the use of an independent charger. The independent charger is supplied with the wheelchair.

1. Attach the battery charger connector to the charger port on the front of the joystick.
2. Plug the charger’s AC power cord or extension into the grounded 110-volt wall outlet.
3. When charging is complete, turn charger off.
4. Disconnect output cable from joystick charger port.

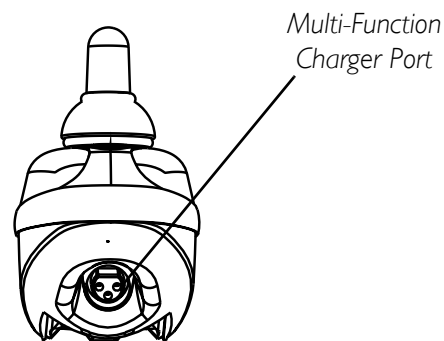


FIGURE 8.4 - CHARGING USING AN INDEPENDENT CHARGER PLUGGED INTO THE JOYSTICK

SECTION 9—MOTORS

⚠ WARNING

After **ANY** adjustments, repair or service and **BEFORE** use, make sure that all attaching hardware is tightened securely - otherwise injury or damage may result.

Before performing any maintenance, adjustment or service verify that on/off switch on the joystick is in the off position.

ENGAGING/DISENGAGING THE MOTORS

⚠ WARNING

DO NOT attempt to transfer into or out of the wheelchair without the motor engagement handles in the engaged (horizontal) position.

DO NOT engage or disengage the motors until the power is off.

Push the motor engagement handles all the way down to engage the motors.

Engaging/Disengaging the motor allows free-wheeling the wheelchair or operating it by a joystick. Free-wheeling allows an attendant to maneuver the wheelchair without power.

NOTE: For this procedure, refer to FIGURE 9.1.

1. Locate the motor engagement handle on one (1) motor.

⚠ CAUTION

If the motor engagement handles are forced to engage in the wrong direction, the motors will be damaged and will need to be replaced.

2. Perform one (1) of the following:
 - A. To Engage - Push the motor engagement handle all the way down (to the horizontal position) towards the front of the wheelchair.
 - B. To Disengage - Pull up the motor engagement handle (to the vertical position).
3. Repeat STEPS 1-2 for to engage/disengage the other motor.

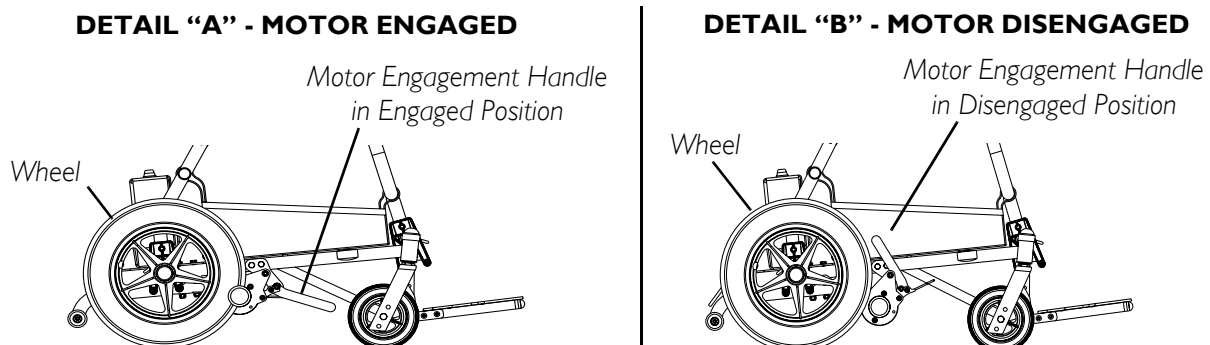


FIGURE 9.1 - ENGAGING/DISENGAGING THE MOTORS

SECTION 10—WHEELS AND CASTERS

⚠ WARNING

After **ANY** adjustments, repair or service and **BEFORE** use, make sure that all attaching hardware is tightened securely - otherwise injury or damage may result.

Before performing any maintenance, adjustment or service verify that on/off switch on the joystick is in the off position.

DO NOT USE YOUR WHEELCHAIR UNLESS IT HAS THE PROPER TIRE PRESSURE (P.S.I.) - OTHERWISE THE WHEELCHAIR MAY NOT DRIVE CORRECTLY, STOP CORRECTLY OR MAY EXPERIENCE ERRATIC PERFORMANCE.

DO NOT overinflate the tires. Failure to follow these suggestions may cause the tire to explode and cause bodily harm. The recommended tire pressure is listed on the side wall of the tire.

Keep fingers and clothing clear of drive wheels.

⚠ CAUTION

As with any vehicle, the wheels, casters and tires should be checked periodically for cracks and wear and should be replaced.

REPLACING FRONT CASTERS

NOTE: For this procedure, refer to FIGURE 10.1.

1. Remove the mounting bolt, two (2) spacers and locknut that secures the caster to the fork.
2. Remove the caster and discard.
3. Secure new caster to fork with the existing mounting bolt, two (2) spacers and locknut. Securely tighten.
4. Repeat STEPS 1-3 for the other caster.

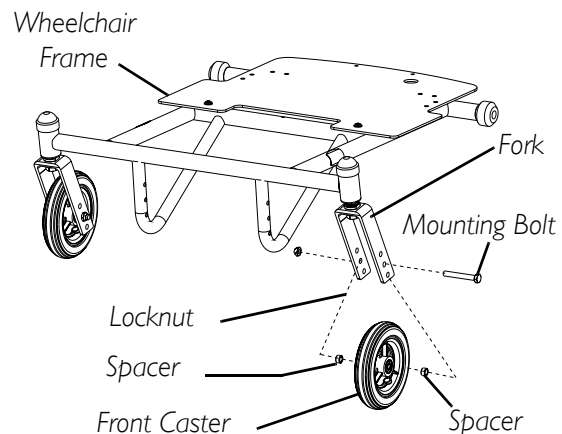


FIGURE 10.1 - REPLACING FRONT CASTERS

ADJUSTING FORKS

NOTE: For this procedure, refer to FIGURE 10.2.

1. Remove the dust covers from the caster headtubes.
2. To properly tighten the caster journal system and guard against flutter, perform the following check:
 - A. Remove battery pack from wheelchair. Refer to Removing/Installing the Battery Pack on page 35.
 - B. Tip back the wheelchair to floor.
 - C. Pivot both forks and casters to top of their arc simultaneously.
 - D. Let casters drop to bottom of arc (wheels should swing once to one-side, then immediately rest in a straight downward position).
 - E. Adjust locknuts according to freedom of caster swing.
 - F. Bring wheelchair back to driving position.
 - G. Install the battery pack. Refer to Removing/Installing the Battery Pack on page 35.
3. Test wheelchair for maneuverability.
4. Readjust locknuts if necessary, and repeat STEPS 1-3 until correct.
5. Snap dust covers into the caster headtubes.

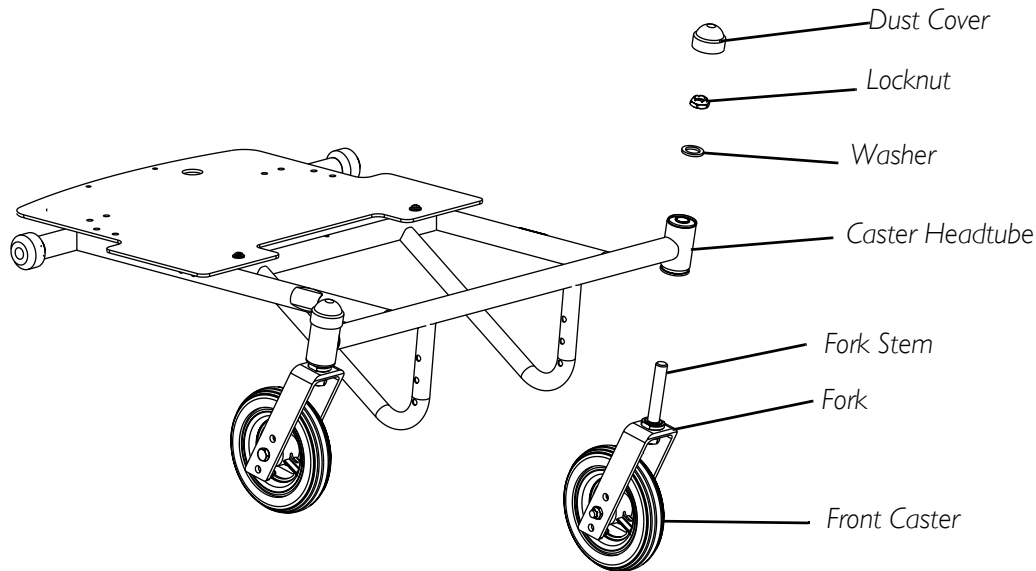


FIGURE 10.2 - ADJUSTING FORKS

REMOVING/INSTALLING THE DRIVE WHEELS

⚠ WARNING

Maintain tire pressure at 30 p.s.i.

NOTE: For this procedure, refer to FIGURE 10.3.

REMOVING

1. Disengage the motors. Refer to Engaging/Disengaging the Motors on page 39.
2. Push and hold the quick-release button on the drive wheel and pull the drive wheel out of the wheelchair frame.
3. Repeat STEPS 1-2 for the other drive wheel.

INSTALLING

1. Align drive wheel axle with the wheelchair frame.
2. Push and hold the quick-release button on the drive wheel and push the drive wheel into the wheelchair frame.
3. Engage the motor. Refer to Engaging/Disengaging the Motors on page 39.
4. Repeat STEPS 1-3 for the other drive wheel.

⚠ WARNING

Pull the drive wheel to ensure that the drive wheel is locked in place before operating the wheelchair - otherwise serious injury or damage may occur.

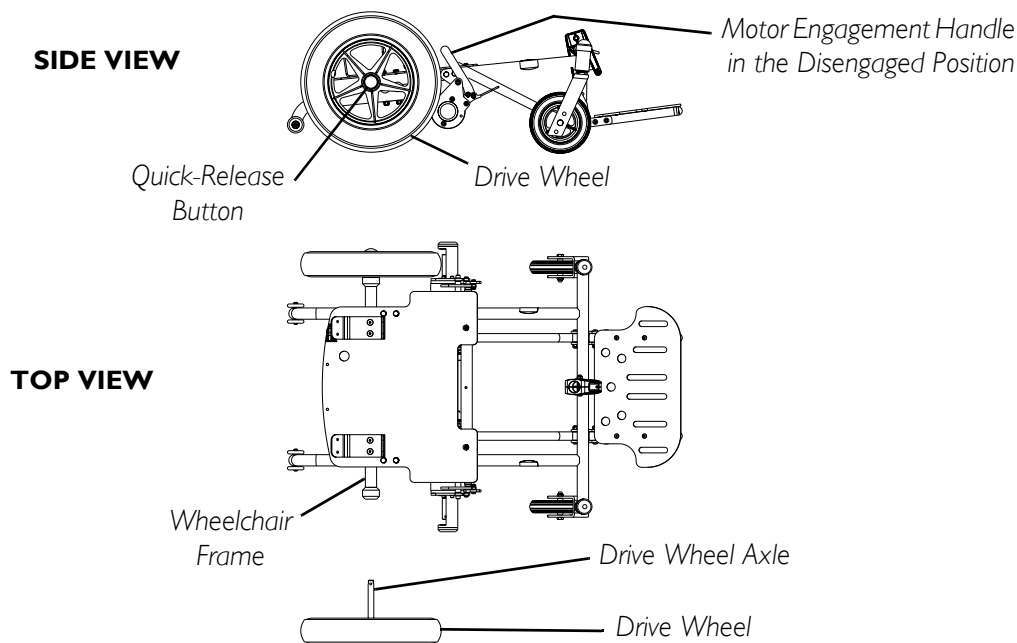


FIGURE 10.3 - REMOVING/INSTALLING THE DRIVE WHEELS

SECTION 11—TRANSPORTING THE WHEELCHAIR

⚠ WARNING

After **ANY** adjustments, repair or service and **BEFORE** use, make sure all attaching hardware is tightened securely - otherwise injury or damage may result.

The weight of the wheelchair without the user and batteries is approximately 74 lbs. Use proper lifting techniques (lift with your legs) to avoid injury. Extreme caution is advised when it is necessary to move an unoccupied power wheelchair. Invacare recommends using two (2) assistants and making thorough preparations. Make sure to use **ONLY** secure, non-detachable parts for hand-hold supports.

1. Remove the occupant from the wheelchair.
2. Remove the battery pack. Refer to Removing/Installing the Battery Pack on page 35.
3. Remove the seat. Refer to Removing/Installing the Seat on page 29.
4. Remove any accessories on the wheelchair.
5. Bend your knees and keep your back straight.
6. Using non-removable (nondetachable) parts, transfer the seat, battery pack, wheelchair base and any accessories to the desired location.
7. Reinstall any accessories that were removed in STEP 3.
8. Reinstall the seat. Refer to Removing/Installing the Seat on page 29.
9. Reinstall the battery pack. Refer to Removing/Installing the Battery Pack on page 35.

LIMITED WARRANTY

PLEASE NOTE: THE WARRANTY BELOW HAS BEEN DRAFTED TO COMPLY WITH FEDERAL LAW APPLICABLE TO PRODUCTS MANUFACTURED AFTER JULY 4, 1975.

This warranty is extended only to the original purchaser/user of our products.

This warranty gives you specific legal rights and you may also have other legal rights which vary from state to state.

With regards to the original purchaser/user only, Invacare warrants the base frame to be free from defects in materials and workmanship for a period of three (3) years from date of purchase; seat frame for a period of three (3) years from the date of purchase; electronics, motors and gearboxes for a period of one (1) year from the date of purchase; all remaining components for one (1) year from the date of purchase except upholstered materials, padded materials and tires/wheels. If within such warranty period any product shall be proven to be defective, such product shall be repaired or replaced, at Invacare's option. This warranty does not include any labor or shipping charges incurred in replacement part installation or repair of any such product. Invacare's sole obligation and your exclusive remedy under this warranty shall be limited to such repair and/or replacement.

For warranty service, please contact the dealer from whom you purchased your Invacare product. In the event you do not receive satisfactory warranty service, please write directly to Invacare at the address on the bottom of the back cover. Provide dealer's name address, date of purchase, indicate nature of the defect and, if the product is serialized, indicate the serial number. Do not return products to our factory without our prior consent.

LIMITATIONS AND EXCLUSIONS: THE FOREGOING WARRANTY SHALL NOT APPLY TO SERIAL NUMBERED PRODUCTS IF THE SERIAL NUMBER HAS BEEN REMOVED OR DEFACED, PRODUCTS SUBJECT TO NEGLIGENCE, ACCIDENT, IMPROPER OPERATION, MAINTENANCE OR STORAGE, COMMERCIAL OR INSTITUTIONAL USE, PRODUCTS MODIFIED WITHOUT INVACARE'S EXPRESS WRITTEN CONSENT INCLUDING, BUT NOT LIMITED TO, MODIFICATION THROUGH THE USE OF UNAUTHORIZED PARTS OR ATTACHMENTS; PRODUCTS DAMAGED BY REASON OF REPAIRS MADE TO ANY COMPONENT WITHOUT THE SPECIFIC CONSENT OF INVACARE, OR TO A PRODUCT DAMAGED BY CIRCUMSTANCES BEYOND INVACARE'S CONTROL, AND SUCH EVALUATION WILL BE SOLELY DETERMINED BY INVACARE. THE WARRANTY SHALL NOT APPLY TO PROBLEMS ARISING FROM NORMAL WEAR OR FAILURE TO ADHERE TO THESE INSTRUCTIONS. A CHANGE IN OPERATING NOISE, PARTICULARLY RELATIVE TO MOTORS AND GEARBOXES DOES NOT CONSTITUTE A FAILURE. ALL SUCH DEVICES WILL EXHIBIT A CHANGE IN OPERATING NOISE DUE TO AGING.

THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IN LIEU OF ANY OTHER WARRANTIES WHATSOEVER, WHETHER EXPRESS OR IMPLIED, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, AND THE SOLE REMEDY FOR VIOLATIONS OF ANY WARRANTY WHATSOEVER, SHALL BE LIMITED TO REPAIR OR REPLACEMENT OF THE DEFECTIVE PRODUCT PURSUANT TO THE TERMS CONTAINED HEREIN, THE APPLICATION OF ANY IMPLIED WARRANTY WHATSOEVER SHALL NOT EXTEND BEYOND THE DURATION OF THE EXPRESS WARRANTY PROVIDED HEREIN. INVACARE SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES WHATSOEVER.

THIS WARRANTY SHALL BE EXTENDED TO COMPLY WITH STATE/PROVINCIAL LAWS AND REQUIREMENTS.



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